

REMARKS

Reconsideration of this application, as amended, is respectfully requested.

Claims 1-5, 7-14 and 30 are pending. Claims 1-5, 7-14 and 30 stand rejected. Claims 1, 12 and 30 have been amended. Support for the amendments is found in the specification, the drawings, and in the claims as originally filed. Applicants submit that the amendments do not add new matter.

Rejections Under 35 U.S.C. 102(b)

Claims 1-3, 7-8 and 30 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Japanese Patent No. 04144130, of Ogawa Kaoru ("Ogawa Kaoru"). The Examiner stated that:

"Ogawa Kaoru discloses a plasma chamber (Abstract and Fig 3), a circular (solid) shield plate and a support structure for the shield plate (Fig 3). Regarding claim 8 it is inherent that the dimensions of the shield plate will be determined according to size of substrate and the plasma chamber."

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Applicants respectfully submit that claim 1, as amended, is not anticipated by Ogawa Kaoru. Claim 1 includes the following limitations:

An apparatus comprising:
a plasma chamber containing a plasma for a plasma-assisted material process upon a substrate;
a solid shielding plate within said plasma chamber disposed between the substrate and a gas inlet of the plasma chamber to actively direct ion flux to desired areas of the substrate; and
a supporting structure to support said shielding plate in a stationary position within said chamber.

(Amended claim 1) (Emphasis added)

The shielding plate of Ogawa Kaoru is not disclosed to be a solid shielding plate. Furthermore, the shielding plate of Ogawa Kaoru is not supported in a stationary position. As disclosed, the shielding plate of Ogawa Kaoru is supported on an axle-like member, perpendicular to the plane of the wafer, around which the shielding plate rotates. This is in contrast to the claimed present invention. Applicants have amended claim 1 to clarify that the solid shielding plate of the present invention is supported in a stationary position by the supporting structure.

For these reasons, applicants respectfully submit that claim 1 is not anticipated by Ogawa Kaoru. Given that claims 2, 3, 7, and 8, depend, directly or indirectly, from claim 1, applicants respectfully submit that claims 2, 3, 7, and 8 are, likewise, not anticipated by Ogawa Kaoru. Further, given that amended claim 30 includes the limitation of a stationary shield, applicants respectfully submit that claim 30 is not anticipated by Ogawa Kaoru for the reasons discussed above.

Rejections Under 35 U.S.C. § 103(a)

Claims 1-5, 8-11 and 13-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,534,751 of Lenz et al. ("Lenz") in view of Japanese Patent No. 04144130 of Ogawa Kaoru ("Ogawa Kaoru").

It is also respectfully submitted that Ogawa Kaoru does not teach or suggest a combination with Lenz and that Lenz does not teach or suggest a combination with Ogawa Kaoru. It would be impermissible hindsight based on applicants' own disclosure to incorporate the rotatable shielding plate of Ogawa Kaoru into the fixed and rigid structure of Lenz. Ogawa Kaoru teaches away from any incorporation with Lenz for this reason. Moreover, such a combination would still lack a solid shielding plate as claimed in amended claim 1, as Ogawa Kaoru does not disclose a solid shielding plate.

Claim 12 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Japanese Patent No. 04144130 of Ogawa Kaoru ("Ogawa Kaoru") in view of U.S. Patent No. 6,008,130 of Henderson ("Henderson").

Applicants respectfully submit that Henderson is not permissibly combinable with Ogawa Kaoru for the reasons discussed above. Henderson teaches the same fixed and rigid structure for the shield as Lenz. Moreover, claim 12, as amended, clarifies that all edges of the shielding plate are rounded. Henderson discloses that only annular corners 50 and 52 are rounded off to reduce stress-related flaking of the film from the shield. In contrast, the claimed present invention rounds all edges to reduce the risk of electrostatic discharge. Applicants have amended claim 12 to clarify that all edges of the shield are rounded.


For these reasons, applicants respectfully submit that claim 12 is not rendered obvious by Henderson in view of Ogawa Kaoru.

It is respectfully submitted that in view of the amendments and arguments set forth herein, the applicable rejections and objections have been overcome. If there are any additional charges, please charge Deposit Account No. 02-2666 for any fee deficiency that may be due.

Respectfully submitted,

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